CALIFORNIA PLANT PEST and DISEASE REPORT

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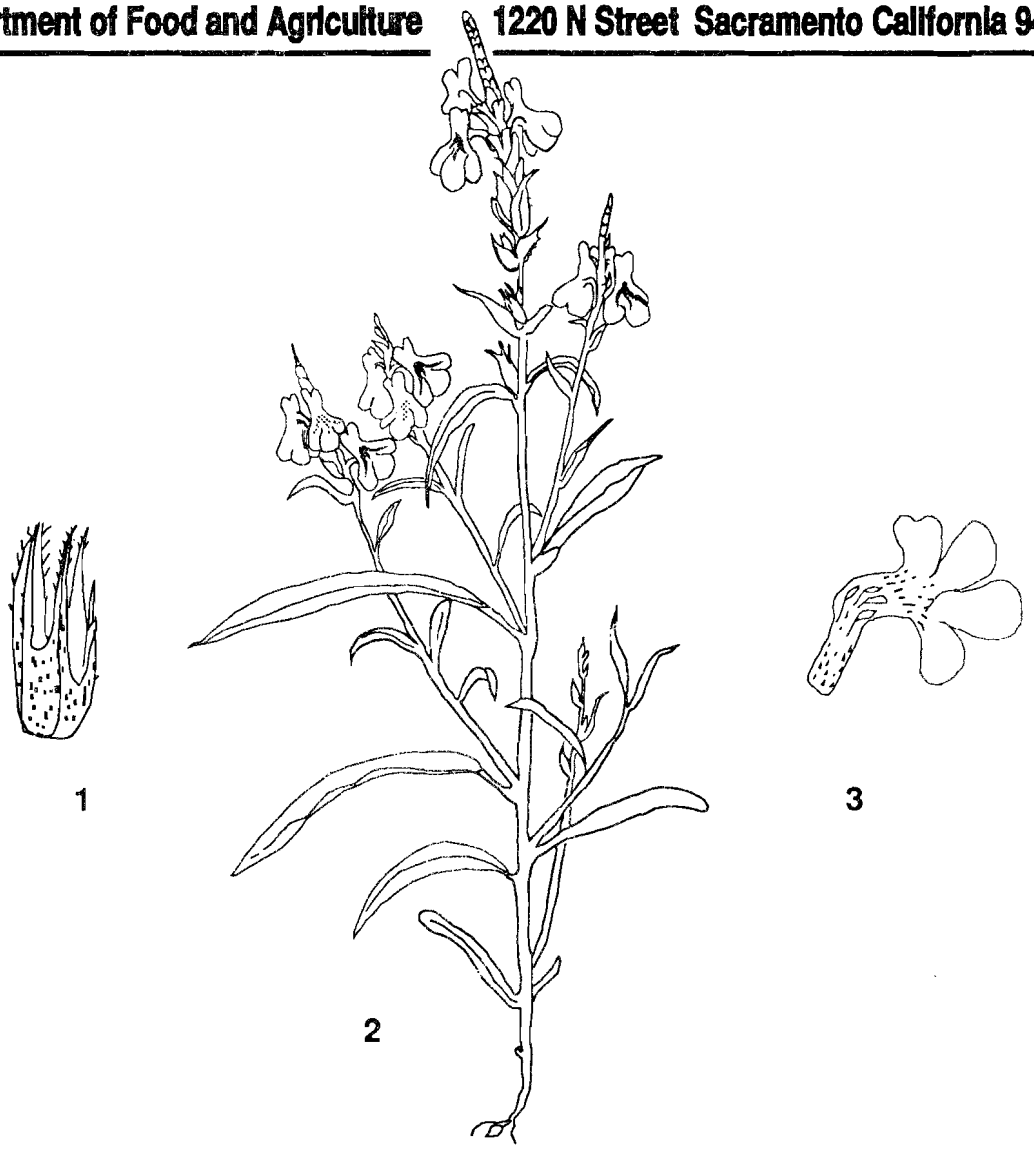
California Department of Food and Agriculture 1220 N Street Sacramento California 94271



A witch weed, *Striga hermonthica*.. 1. calyx; 2. entire plant; 3. opened flower
The source for the art work is Hosmani, 1978. See cover story on page 60.

Correspondence should be addressed to the appropriate member of the editorial staff of the California Plant Pest and Disease Report (C.P.P.D.R.):

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PLEASE NOTE!!
ADDRESS CHANGE

THE FORMAT TO BE USED ON GENERAL CORRESPONDENCE IS AS FOLLOWS:

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-A NOTE FROM THE ENTOMOLOGY EDITOR-

C.P.P.D.R. has always been a kind of experiment. It has never had any particular direction although the current editors are attempting to follow the list of objectives enumerated below. There has not been particularly strong support for the project within the Division of Plant Industry over the years and this is not likely to change. However those who have supported C.P.P.D.R. in the past are greatly appreciated. Most importantly, the response of our reading audience seems to indicate that this publication is worth while.

C.P.P.D.R. is:

1. An attempt to inform interested individuals of current events of plant quarantine significance;
2. A vehicle for the publication of new information generated by Analysis and Identification Branch personnel about plant pests such as economics, locality records, host data, changes in pest habits or biologies, and of various research projects conducted by laboratory personnel; and
3. An effort to acknowledge and bring credit to those who make the discoveries of new infestations of exotic pests or discover other information worthy of reporting.

Continuation of C.P.P.D.R. in the future is limited to: (not including administrative whim, the researcher's desire to use this publication vehicle and the editors' energies) the continued discoveries of new pests and on-going pest problems in California. At this point in time, there seems to be no end to sufficient subject matter for the future. Also, articles continue to be welcome from workers outside the Department who wish to convey information regarding agricultural pests.

In a sense, this issue is another kind of experiment. It is wholly produced and modified on a computer. All written words, illustrations, graphs, headers, layout and so on have been passed through an Apple Macintosh Plus™ computer and produced with Macintosh compatible programs as camera ready copy on an Apple laser printer. This issue is the editors' experiment with the "New Technology," a technology that is simply mind-boggling. This is not an experiment with word processing or spreadsheets or data management, but something much more far reaching. It is the combination of computer generated scientific illustrations and visual graphics with word processing and databases. That is, illustrations that are as easy to produce, to change, to improve, as a word in a word processing program or a number in a spread sheet. A picture is said to equal a thousand words. It is hoped that these computer graphics will be that valuable to the reader in this issue and in future issues.

While there are no original scientific illustrations in this issue, only redrawn or scanned ones, the potential for new, computer generated, print quality scientific illustrations and graphics can no longer be ignored. The superior computer programs used to produce this issue are primarily the personal possessions of the Entomological editor. Their use was meant as a testimonial to the worth of these computer systems as publication tools in order to alert the attentions of Departmental management, our research community and our readers that such publication potential now exists . It would be in the best interests of both our contributers and our readers to further pursue this new and expanding technology.

COVER STORY

WITCHWEEDS—PARASITIC PLANTS

by Tammy Chinn
CDFA, Exotic Pest Analysis Staff

"Witchweed" refers to a group of parasitic plants within the genus *Striga* (Scrophulariaceae) that attack the roots of numerous graminaceous and leguminous crops such as corn, sorghum and cowpeas. At least twenty-five species of *Striga* have been identified and evidence suggests the existence of distinct strains within species.

Striga plants are aesthetically pleasing with colorful flowers typical of the monkey flower family. Despite its appearance, *Striga* is an obligate xylem parasite, siphoning nutrients and water from its host, effecting drought-like conditions even in the presence of adequate moisture. Yields are significantly reduced and in many cases, total crop failure may result.

Striga is an Old World genus; documentation of the weed in Asia and Africa dates back to the 18th century. In the United States, *Striga asiatica* (L.) Kuntze has been under quarantine in North and South Carolina since the late 1950's.

Large numbers of long-lived seeds, combined with an ability to adapt to adverse soil and water conditions, make witchweed difficult to fully eradicate, although it can be controlled.

Witchweed requires exposure to a chemical compound, typically exuded from the host root, in order to germinate. Subsequent to germination, the parasite must attach itself to a suitable host within four days to avoid death. Artificial stimulants, used in the absence of a susceptible host, induce "suicidal" germination and have become a popular method of control. Complete eradication is unlikely due to the fact that each *Striga* plant produces up to 500,000 seeds, each having a life span of approximately 20 years.

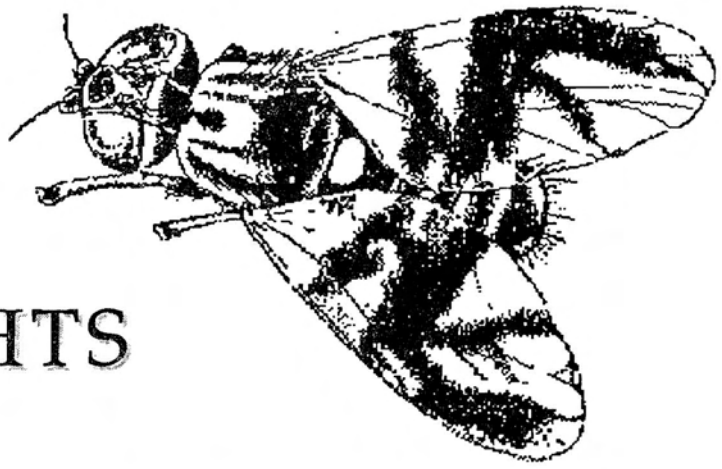
Witchweed does poorly in high quality soils that are well-structured and high in nutrients. Maintaining healthy soil systems and early detection are key prevention measures that should be employed in California.

Fig. 1. *Striga asiatica* from India attached to host. a: Roots of the host: Jawar. b: Stem of *S. lutea*. c: roots of *Striga* with haustoria on roots of the host, Jawar. d: *Striga* flower. e: Flower cut open. f: Pistil. g: Seed (modified 100 times).

Fig. 2. *Striga gesnerioides.*

The source for these illustrations is Hosmani, 1978.

ENTOMOLOGICAL



HIGHLIGHTS

This volume of C.P.P.D.R. is a summary of the entomological "happenings" of November and December, 1987 and a recapitulation of all of 1987 as it relates to finds of certain specific quarantined organisms. This year's exotic pest finds are also compared with collections over the last 5 years.

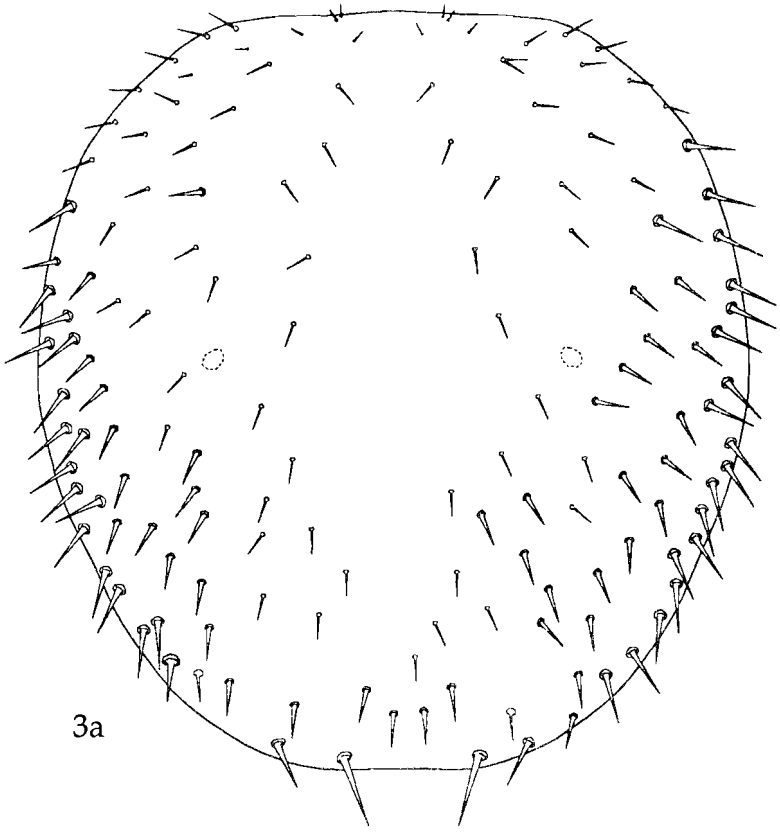
The editor generally restricts entries into the last issue to finds made that year. However, occasionally new pests appear which are important enough to be included even though the event occurred after the end of the calender year. The following collection record is significant enough to be covered in this category.

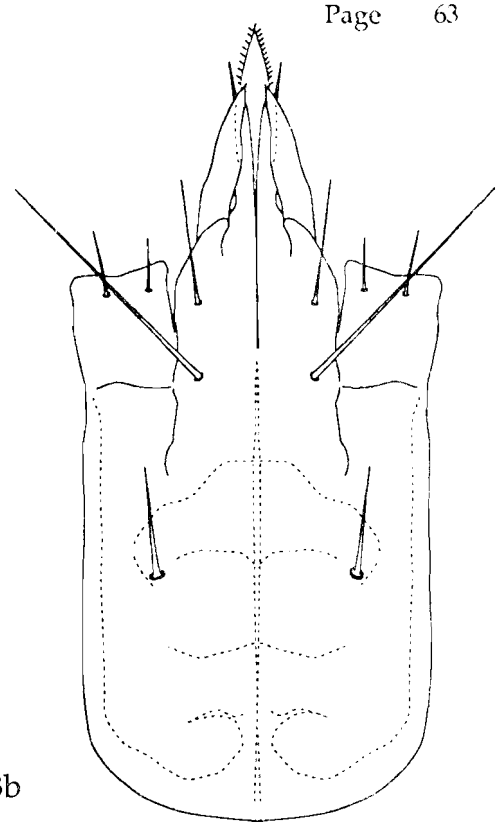
BEE-HIVE MITE, *Melittiphis alvearius* -(Q)- A new mite known to infest bee hives has been found during a varroa mite survey at Lower Lake, Lake County. The collection was made on January 15, 1988 by Chuck Morse and Chris Twohy. This is a new State record.

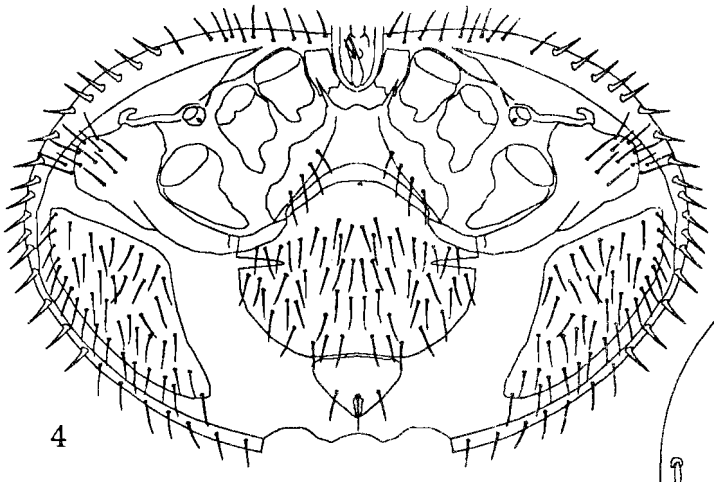
There are several spellings of both the scientific and family names of this mite and it has been placed in two different families at one time or another. The present accepted name is *Melittiphis alvearius* (Berlese). The generic name has been spelled *Mellitiphis* in the literature. The mite is now placed in the familyLAELAPIDAE (once spelled LAELAPTIDAE) and it was once placed in the family Eviphididae. The derivation of the current scientific name is from the Greek words "Melissa" and "Phileo," meaning honeybee-loving and from the Latin word "alvearium," meaning bee hive.

The economic status of the mite is unknown at this time. It is believed to be an actual parasite of the honey bee but this has not been established with certainty. The mite has been known in Europe for many years and it was discovered in New Zealand in 1974.

The mite is easily separated from the varroa mite because of its circular shape. The varroa mite is much more transversely elongate, and is obviously wider than long.







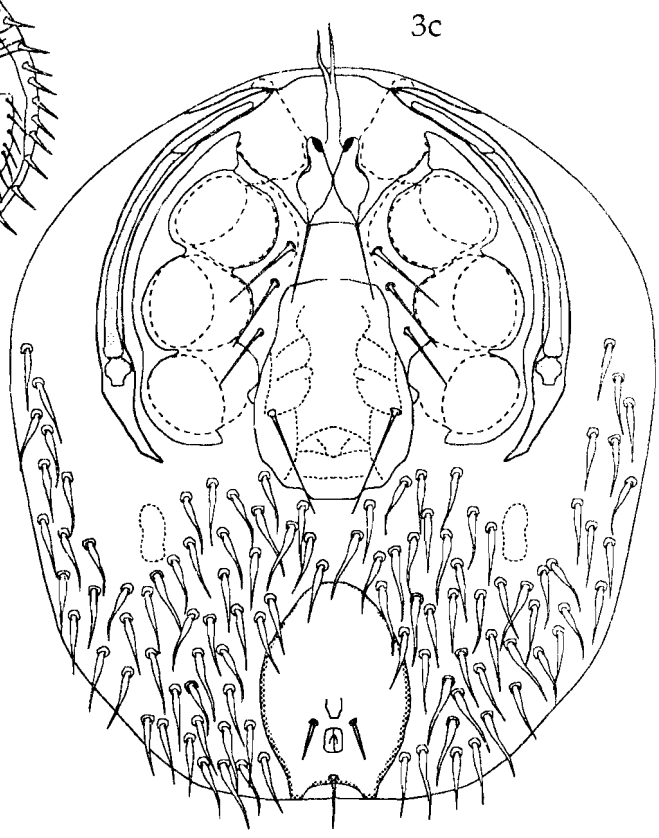


Fig. 3. Beehive mite, *Melittiphus alvearius* (Berlese)- a: female- dorsum of idiosoma. b: venter of gnathosoma. c: venter of idiosoma.

Fig. 4. Varroa mite, *Varroa jacobsoni* Oudemans, female- venter of idiosoma.

SIGNIFICANT FINDS

MELON FLY, *Dacus cucurbitae* -(A)- A total of 7 melon flies were trapped during this period in Los Angeles County. The following series of reports by John Pozzi outline the finds:

"Two melon flies were trapped on November 20 and 21, 1987, in El Segundo, Los Angeles County.

The first melon fly was a male detected in a McPhail trap placed in a lemon tree on West Imperial Avenue. The second melon fly was a female that was found a few blocks away in a McPhail trap placed in an apple tree on West Walnut Avenue.

Los Angeles County trapper Wendy Shepard is credited with finding both melon flies.

McPhail trap density in the area of the finds was 5 traps per square mile. In response, Los Angeles County has increased the trap densities to protocol levels for new melon fly finds. Jackson/cue lure trap densities have been increased over an 81-square mile area to a 50-25-15-10-5 array. In the core square mile the McPhail trap density was increased to 25 traps per square mile. McPhail trap density was already at a 5 traps per mile throughout the 81-square mile area.

The last melon flies trapped in California were found last year in Los Angeles County. One was trapped on January 22, in Los Angeles and one on September 22."

"Four melon flies were trapped between November 25 and 27, 1987 in El Segundo, Los Angeles County. All of the flies were detected within a few blocks of each other and are in the vicinity of melon flies trapped earlier this month in Los Angeles County.

Two of the melon flies were sexually mature males that were detected in Jackson/cue lure traps placed along West Imperial Avenue and Virginia Street in lemon and guava trees, respectively. Two sexually immature female melon flies were found in the same McPhail trap placed in a lemon tree on West Walnut Avenue.

Los Angeles County Department of Agriculture Trappers Rogelio Argueta and Paul White are credited with finding the melon flies."

"A sexually immature male melon fly was trapped November 27, 1987, in El Segundo, Los Angeles County. It was found in a McPhail trap placed in a lemon tree along West Maple Avenue and is near previously reported melon fly trap finds. Los Angeles County Trapper Rogelio Argueta is credited with finding the melon fly.

On November 27, CDFA initiated a ground foliar application of malathion and bait on city and adjoining blocks where melon flies have been detected. Male annihilation treatments using cue-lure and naled was scheduled to begin December 1 in a 1.5 mile radius around all melon fly trap finds."

ORIENTAL FRUIT FLY, *Dacus dorsalis* -(A)- One female was trapped in Santa Ana, Orange County during this period. The following report by John Pozzi outlines the find:

> "An unmated female Oriental fruit fly was trapped on November 23, 1987, in Santa Ana, Orange County. The fly was found in a McPhail trap placed in an orange tree on East 15th Street. A female fly was trapped earlier at this same location on September 29. CDFA Inspector John Hooper is credited with finding the Oriental fruit fly.
>
> McPhail and Jackson/methyl eugenol trap density in the area is 25 traps per square mile. The find is in the Santa Ana Oriental fruit fly male annihilation treatment zone."

GUAVA FRUIT FLY, *Dacus correctus* -(A)- One male was trapped in San Leandro, Alameda County. For full details see the following report by John Pozzi:

> "A male guava fruit fly was trapped on November 6, 1987, in San Leandro, Alameda County. The fly was found in a Jackson/methyl eugenol trap placed in a fig tree on Kent Avenue. Alameda County Trapper Matt Owen is credited with finding the fly.
>
> Jackson/methyl eugenol trap densities have been increased to 25 traps in the epicenter square mile. Jackson/methyl eugenol trap density is being increased to five traps per mile in an 80 square mile area around the epicenter."

Previous guava fruit flies have been trapped in Los Angeles County. This is the first collection this far north.

NEW COUNTY RECORDS

A CIXIID PLANTHOPPER, *Pintalia delicata* -(C)- Two separate collections of this unusual planthopper have been made from apple maggot traps at widely separated locations in the city of Stockton, San Joaquin County. The collections were made by B. Heukstedt in traps placed in an apple and a crab apple tree on Aug. 19 and Sept. 10. The original identifications were made by Kirby Brown, San Joaquin County Entomologist.

According to the literature, it is common in the southeastern U. S. and has occurred as far west as Arizona. It was apparently first found in Blythe, Riverside County in 1958 and later at Fullerton, Orange County in 1967. It also occurs in Imperial County. Its life history, host plants and economic importance are not known. Figures 4 and 5 indicate the physical appearance of this planthopper.

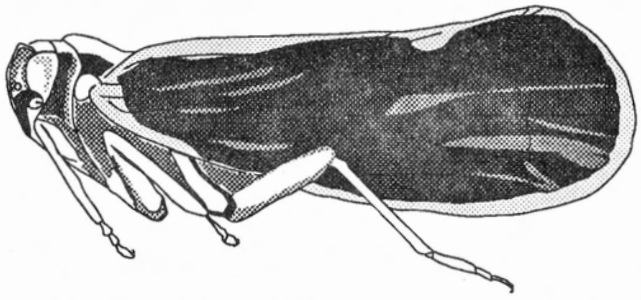


Fig. 4. Adult of *Pintalia delicata* (Fowler), lateral view.

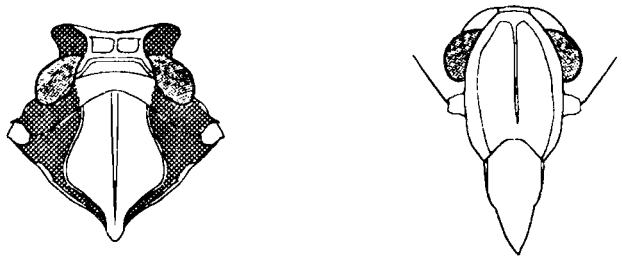


Fig.5. *Pintalia delicata* (Fowler), (left) dorsal view of head: (right) ventral view of head.

SOUTHERN GREEN STINKBUG, *Nezara viridula* -(Q)- Collected for the first time in Contra Costa County at Oakley on November 3 by Laurie Stout. Another Contra Costa collection was made at Brentwood on Nov. 11 by Liese Greensfelder of Ag. Extension.

A further collection at Spring Valley, San Diego County by Belinda Moss on Nov. 10 indicates that the species is definitely established in that County. The species is also known from Yolo, Solano, Sacramento and San Joaquin Counties.

MISCELLANEOUS FINDS OF SIGNIFICANCE

MAGNOLIA WHITE SCALE, *Pseudaulacaspis cockerelli* -(A)- Two separate collections of this armored scale pest were made in California nurseries during this period. The first find was at Chula Vista, San Diego County on Dec. 4 by Jim Kenyon. The second find was at El Cajon, San Diego County on Dec. 24 by Jim Kenyon and Ann Sixtus.

A BEAN WEEVIL, *Zabrotes subfasciatus* -(B)- Collected from dry beans at El Centro, Imperial County on Dec. 2 by Richard Weddle.

CHINESE WAX SCALE, *Ceroplastes sinensis* -(B)- Santa Barbara County personnel have occasionally found one or two specimens of this scale at various locations throughout the city of Santa Barbara. None of the infestations have ever indicated the large population potential that is seen in this species in the Bay Area--until now! Santa Barbara County Entomologist Jerry Davidson has discovered a very heavy infestation of the scale in Santa Barbara on *Schinus terebinthifolius*.

PROBLEM SPECIES

FULLER ROSE BEETLE, *Pantomorus cervinus* -(C)- This weevil has been a serious pest in southern California citrus groves where the fruit is scheduled for shipment to Japan. That country has a strict quarantine against the weevil and against fruit which contains viable egg masses, usually under the calyx cap of the fruit. In August, a very good article on this pest was produced by six authors from U. C. Extension led by J. G. Morse. The article is entitled "Monitoring Fuller rose beetle populations in citrus groves and egg masses on fruit." The article appears in Sunkist Growers Pest Control Circular #547: 1-8. It is highly recommended reading for all southern California Field Entomologists.

EXOTIC PEST FINDS IN CALIFORNIA—A TWO TO SIX YEAR PERSPECTIVE

The Pest Detection/ Emergency Projects Branch of CDFA, under the direction of Don Henry, is responsible for the detection of new and exotic agricultural pests in the state. One member of the staff, John Pozzi, has been the records keeper for the unit and has, with the help of other staff members,produced some interesting data on exotic pest finds in the state over the last six years. This data will be shared here along with a startling look at how easily insect pests can be transported from place to place. The gathering and maintenance of the information used in the database from which these graphs and charts were produced is a team effort by the following PD/EP staff: Becky Burgess, Jeff Bowen, Debbie Haines, Amy Hauck, Susan Henley and Pat Walker. The first report as well as the accompanying map list the trapping locations for sterile Mediterranean fruit flies which had been released in the core eradicative treatment zone in Los Angeles. Many of the finds are most certainly due to the movement of the flies in cars and trucks. Records for Los Angeles and Orange counties were kept separately by each County and are not recorded here.

SUMMARY OF STERILE MEDITERRANEAN FRUIT FLY TRAP FINDS - 1987

COUNTY-CITY number trapped/city		ADULTS TRAPPED males	 females	 unknown	TOTALS
Alameda		1	0	0	1
Livermore	1				
Contra Costa		1	0	0	1
Bethel Island	1				
Fresno		2	1	1	4
Fresno	4				
Kern		9	1	3	13
Bakersfield	6				
Buttonwillow	1				
Lamont	1				
Lebec	2				
Mettler	2				
Mohave	1				
Madera		0	3	0	3
Madera 3					
Merced		1	2	0	3
Dos Palos	1				
Santa Nella	1				
Westside	1				
Riverside		30	17	1	48
Arlington	1				
Corona	13				
Glen Avon	5				
Hemet	1				

(continued)

number trapped/city		males	females	unknown	Totals
Riverside (continued)					
Indio	3				
Lake Elsinore	2				
Mira Loma	2				
Moreno Valley	1				
Palm Springs	1				
Perris	2				
Riverside	16				
San Jacinto	1				
Sacramento		1	2	0	3
Sacramento	3				
San Bernardino		111	46	5	162
Alta Loma	1				
Bloomington	17				
Chino	6				
Colton	9				
Cucamonga	1				
Fontana	37				
Hesperia	1				
Higlands	1				
Loma Linda	4				
Los Serranos	2				
Montclair	14				
Muscoy	1				
Ontario	33				
Pomona	1				
Redlands	1				
Rialto	17				
Rancho Cucamonga	2				
San Bernardino	12				
Upland	2				
San Diego		22	15	2	39
Bonita	1				
Chula Vista	5				
Escondido	3				
Imperial Beach	1				
Mira Mesa	1				
National City	3				
Nestor	1				
Oceanside	3				
Ramona	3				
San Bernardo	1				
San Diego	13				
San Onofre	1				
San Ysidro	1				
Vista	1				
San Joaquin		0	1	0	1
Tracy	1				
San Luis Obispo		1	0	0	1
Grover City	1				

(continued)

STERILE MEDFLIES TRAPPED IN CALIFORNIA 1987

BY COUNTY

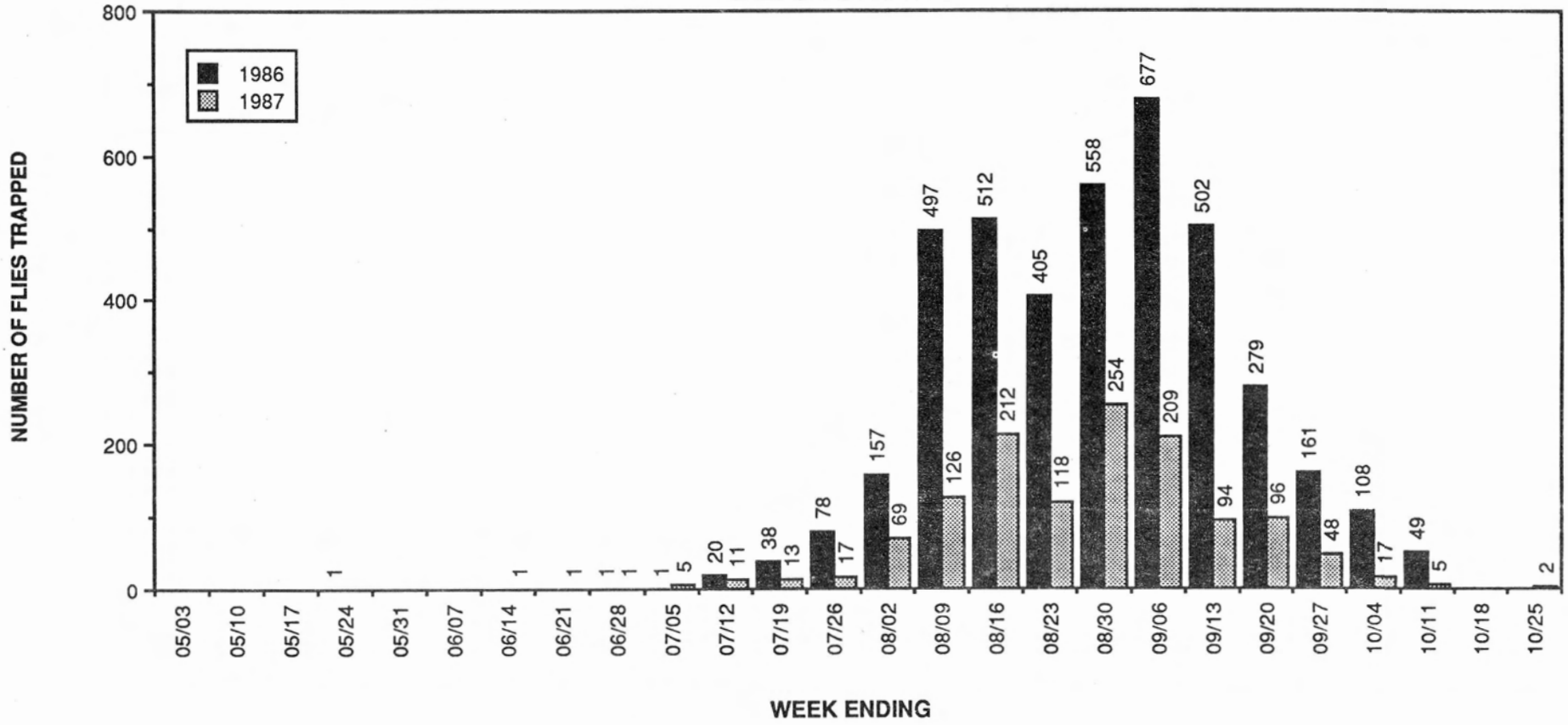
Darkened counties indicate positive finds.

The small white square roughly indicates the sterile release area in southern Los Angeles County.

number trapped/city		males	females	unknown	Totals
Santa Barbara		2	0	0	2
Goleta	1				
Lompoc	1				
Santa Clara		3	0	0	3
San Jose	3				
Santa Cruz		1	0	0	1
Freedom	1				
Stanislaus		0	0	1	1
Modesto	1				
Tulare		1	2	0	3
Earlimart	1				
Exeter	1				
Woodlake	1				
Ventura		33	11	0	44
Camarillo	5				
Fillmore	1				
Moorpark	6				
Newbury Park	3				
Oxnard	1				
Port Hueneme	1				
Santa Paula	3				
Simi Valley	14				
Thousand Oaks	6				
Ventura	4				
B. CFA. (99)		9	2	0	11
Tijuana 11					
Grand Totals		228	103	14	**345**

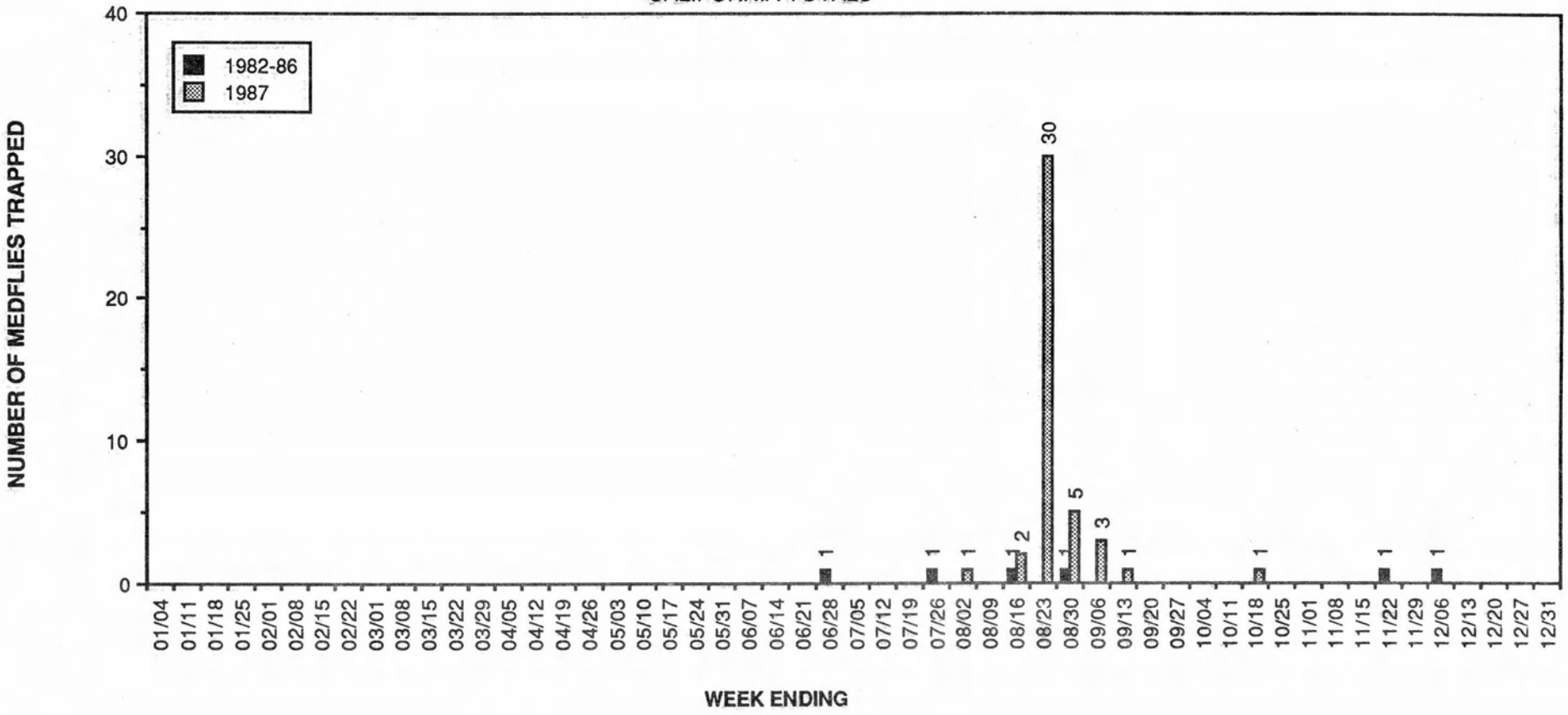
APPLE MAGGOT TRAP FINDS

CALIFORNIA TOTALS



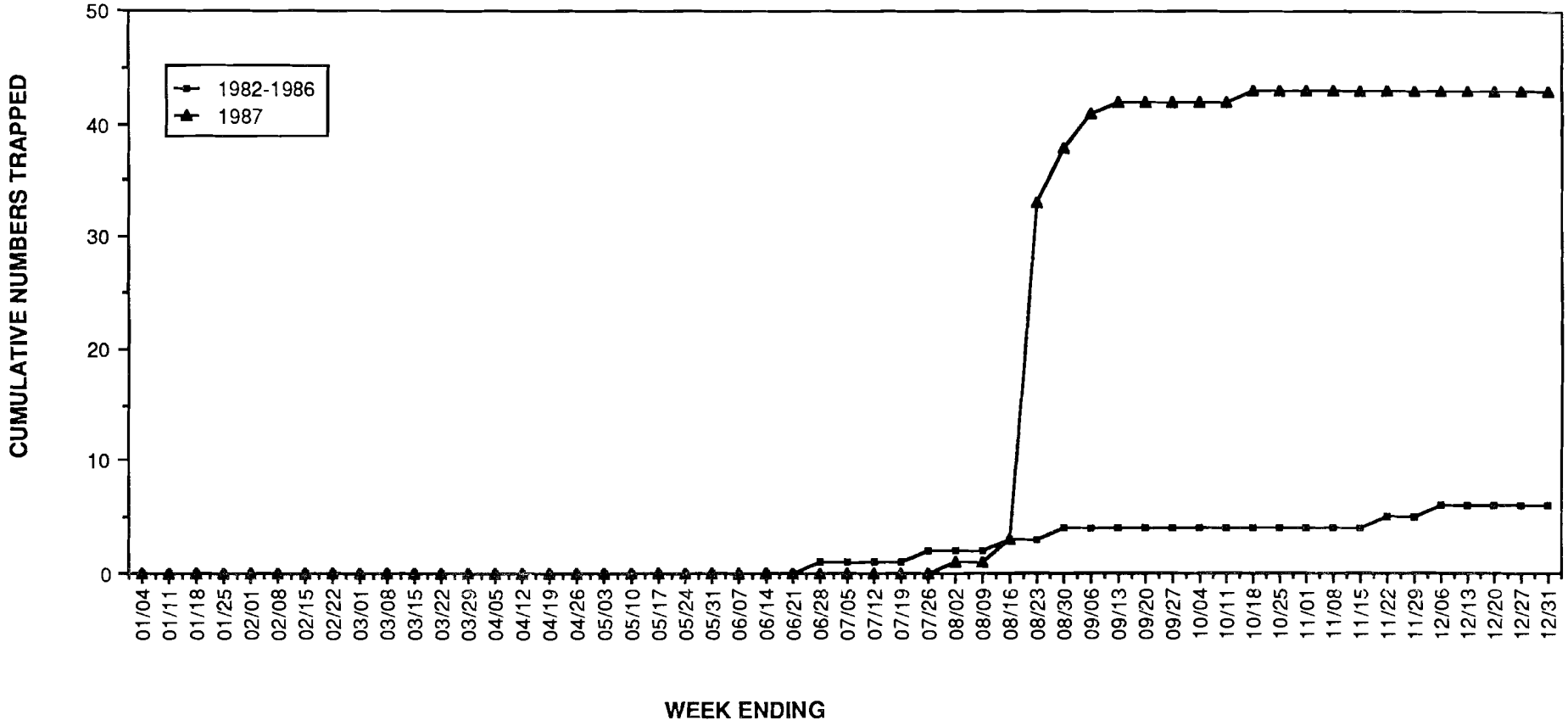
MEDITERRANEAN FRUIT FLY TRAP FINDS

CALIFORNIA TOTALS



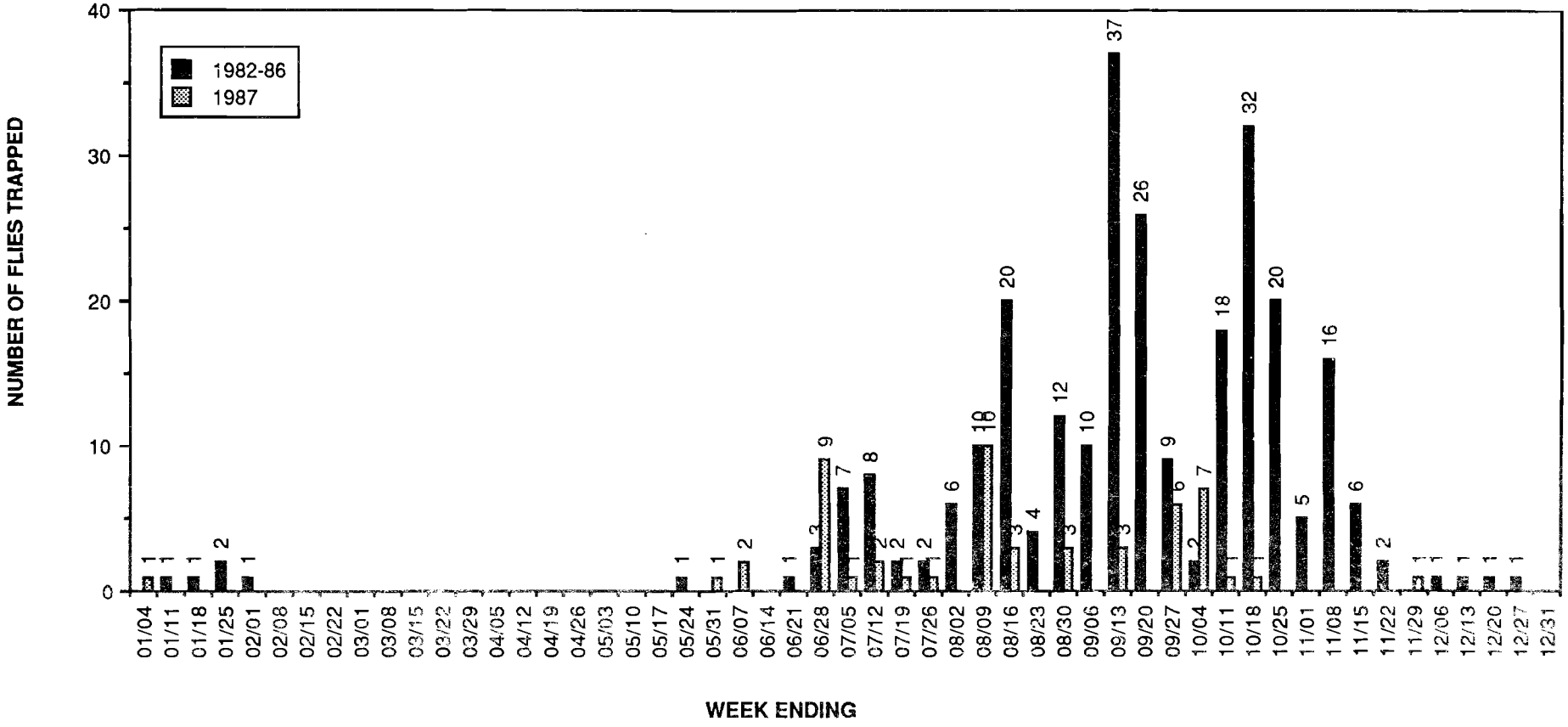
MEDITERRANEAN FRUITFLY TRAP FINDS

CUMULATIVE TOTALS



ORIENTAL FRUIT FLY TRAP FINDS

CALIFORNIA TOTALS



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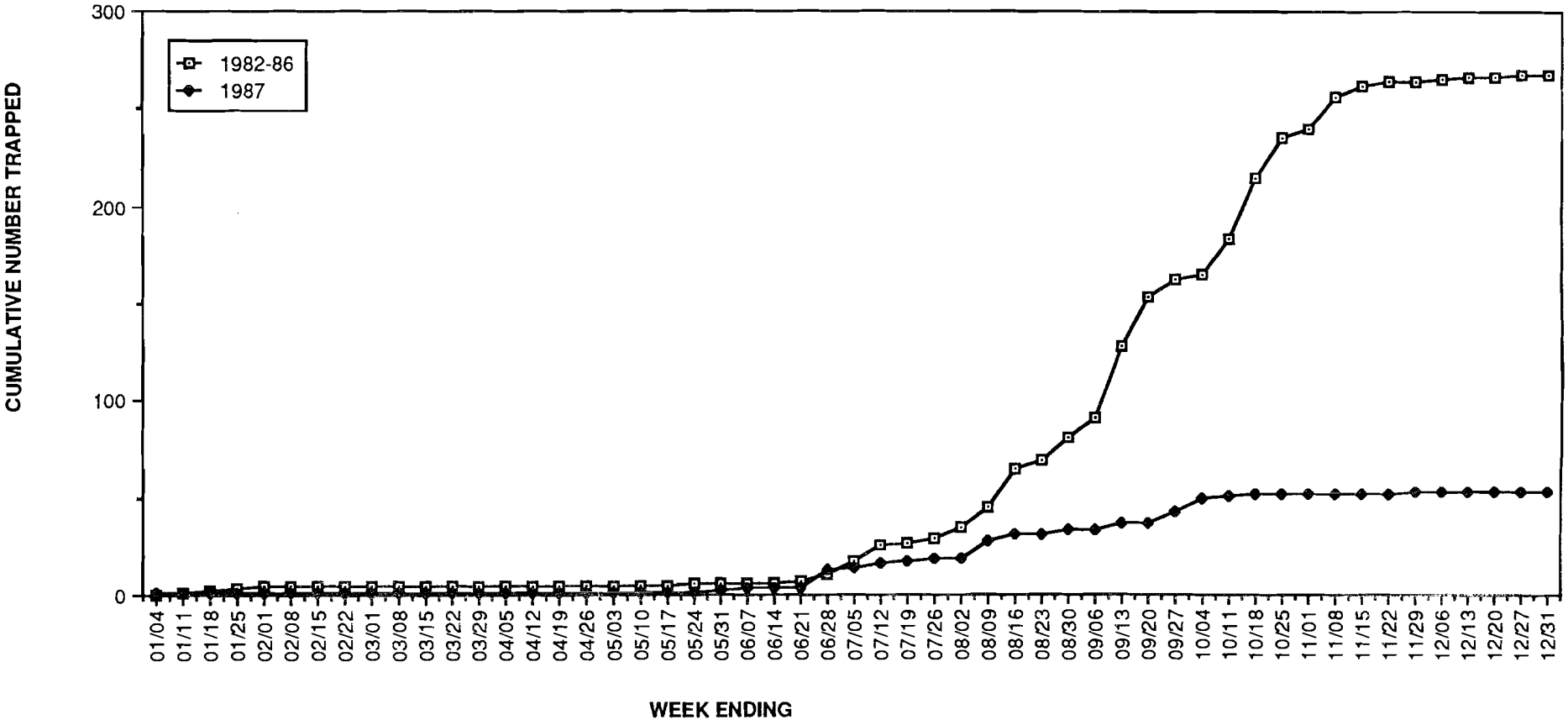
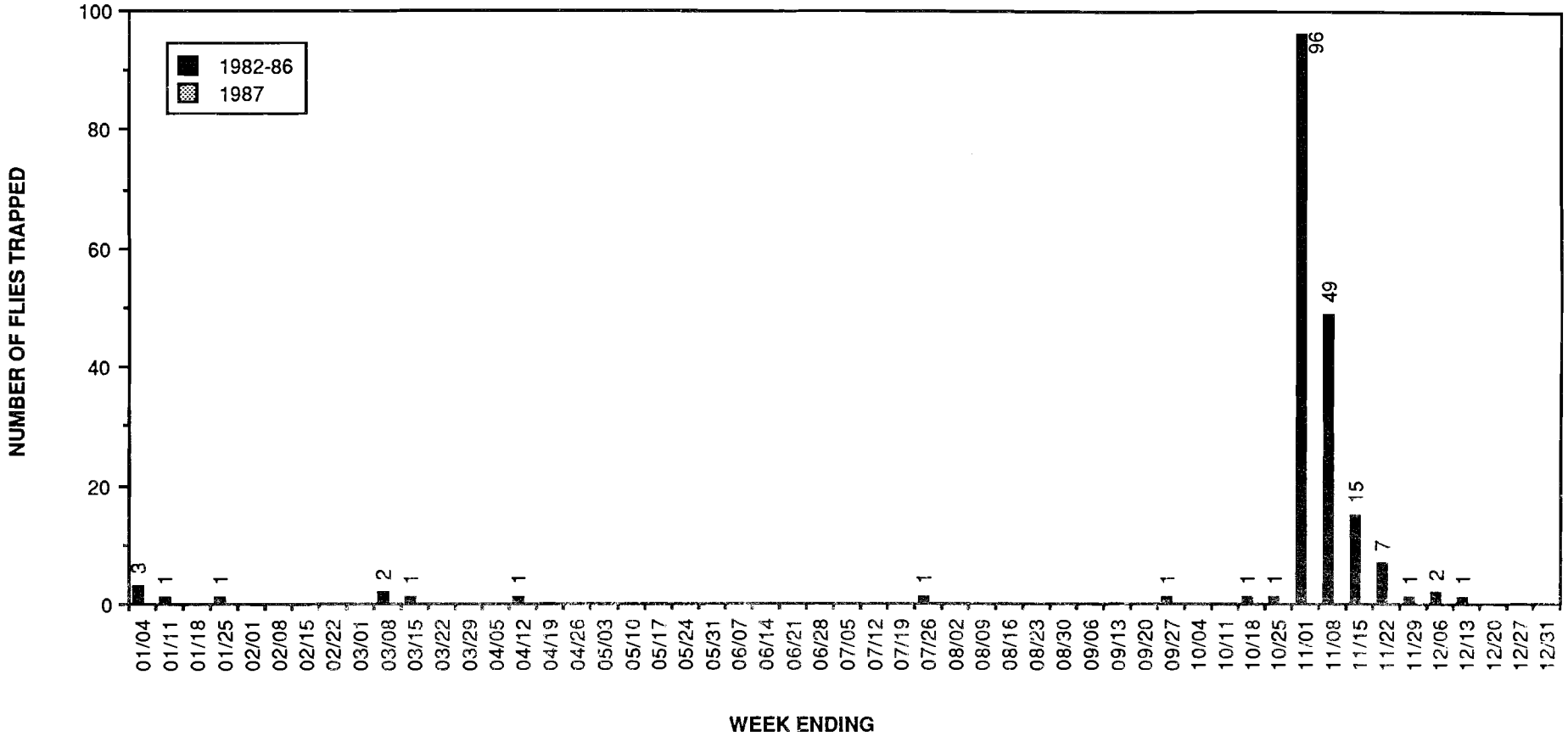


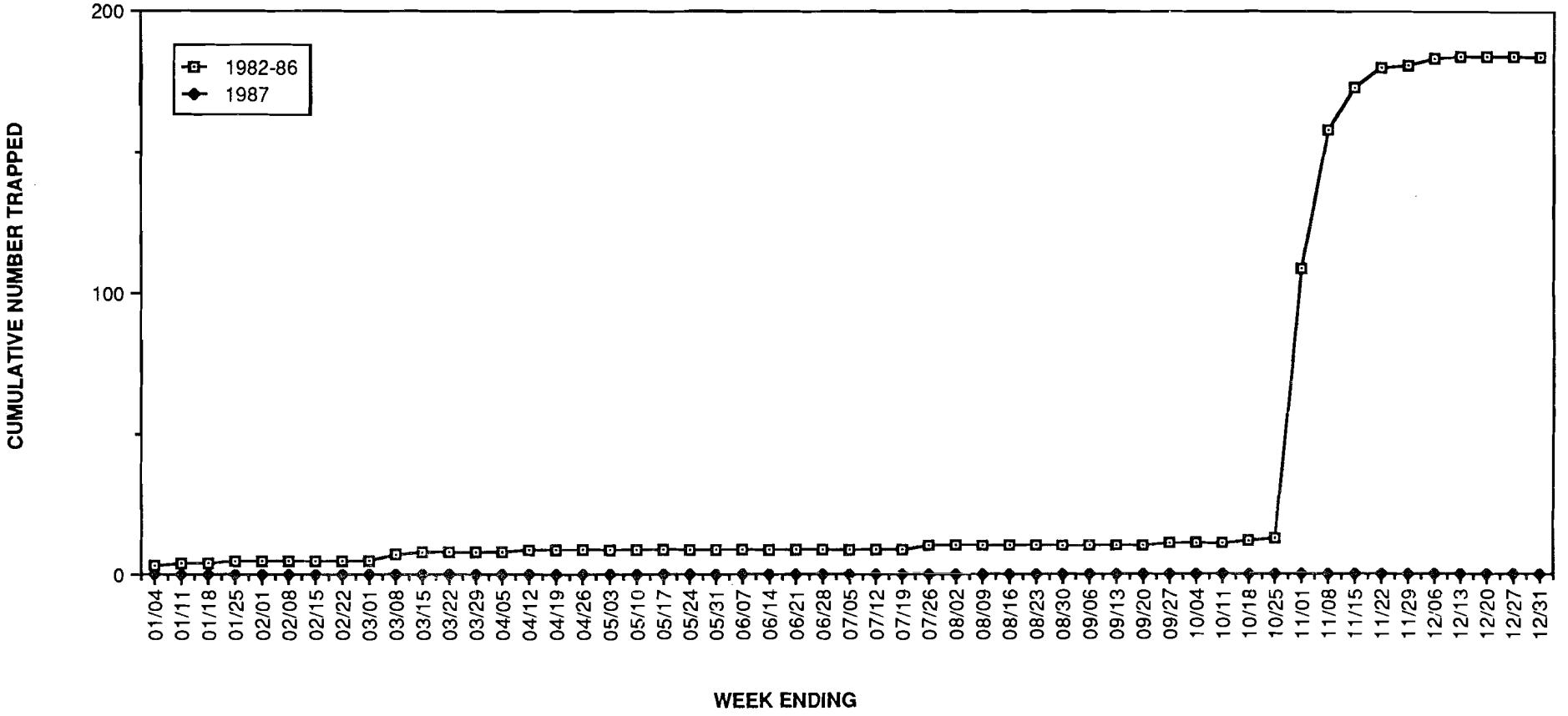
MEXICAN FRUIT FLY TRAP FINDS

CALIFORNIA TOTALS



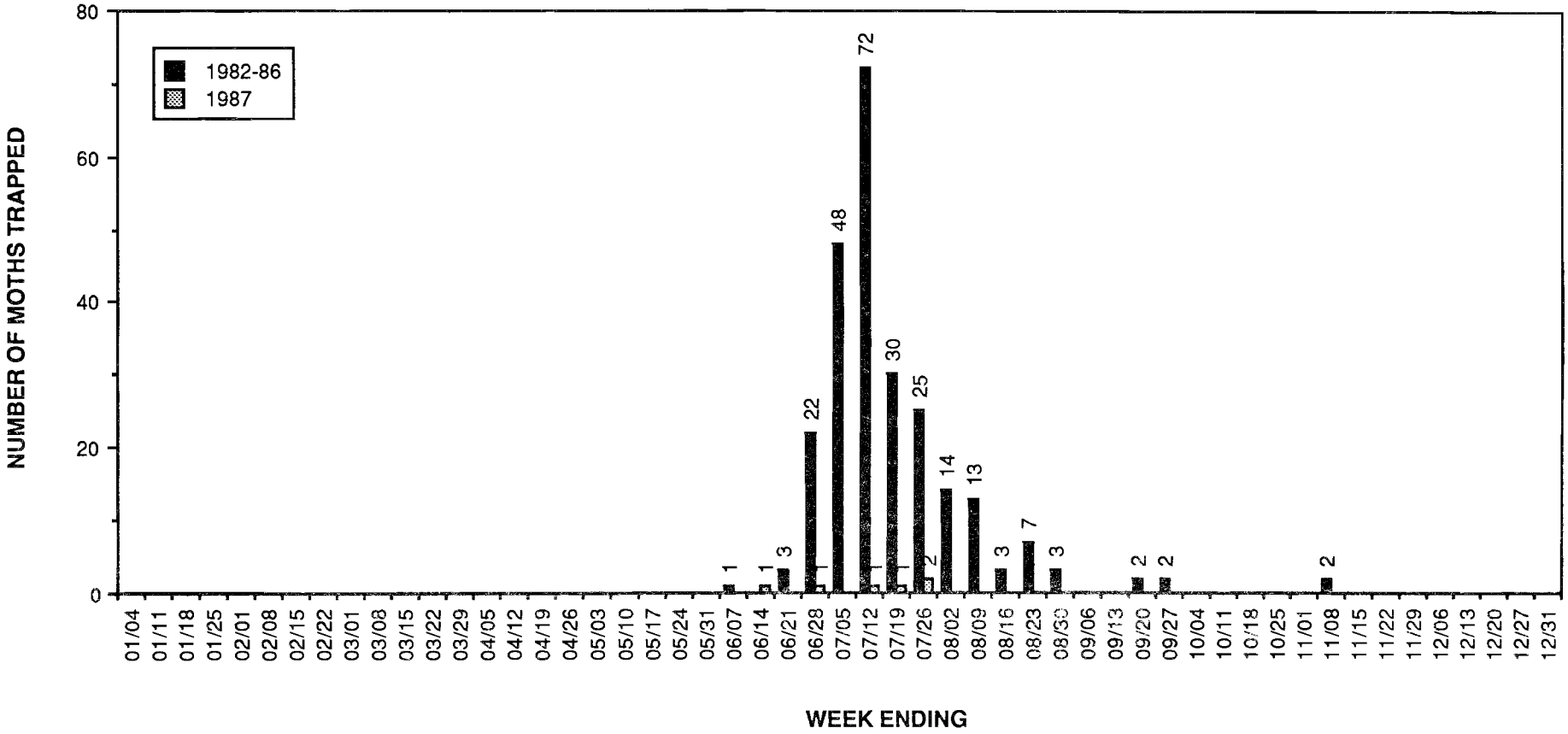
MEXICAN FRUIT FLY TRAP FINDS

CUMULATIVE TOTALS



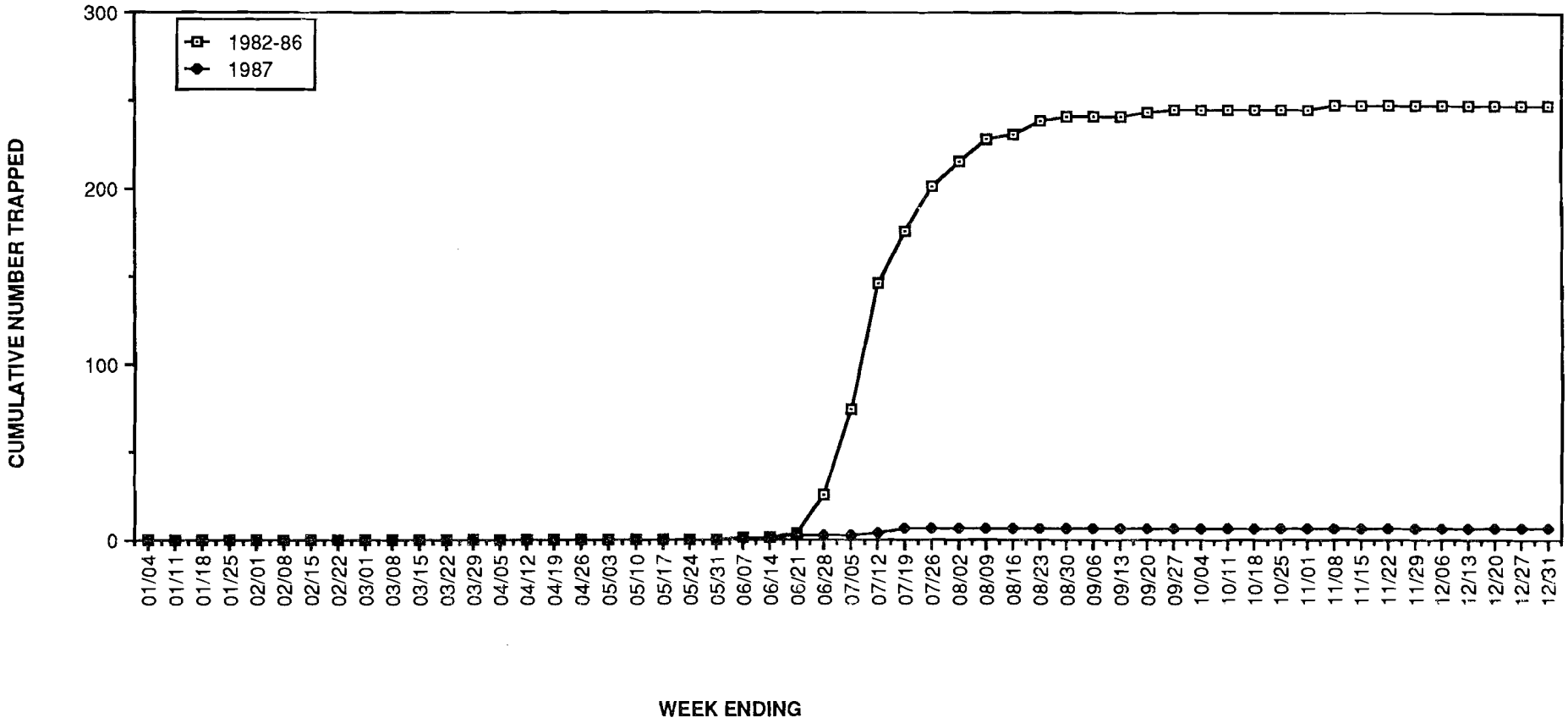
GYPSY MOTH TRAP FINDS

CALIFORNIA TOTALS



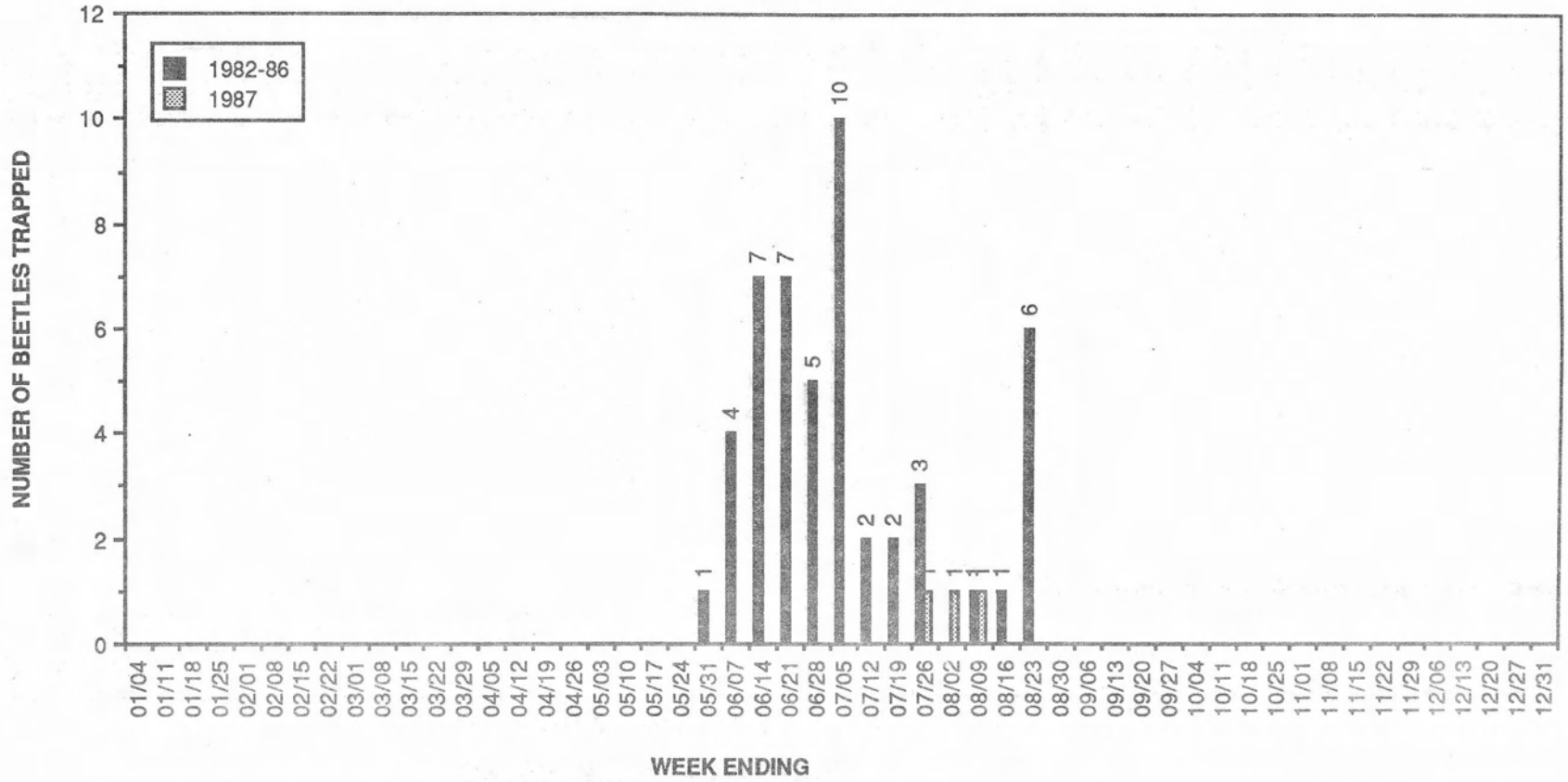
GYPSY MOTH TRAP FINDS

CUMULATIVE TOTALS



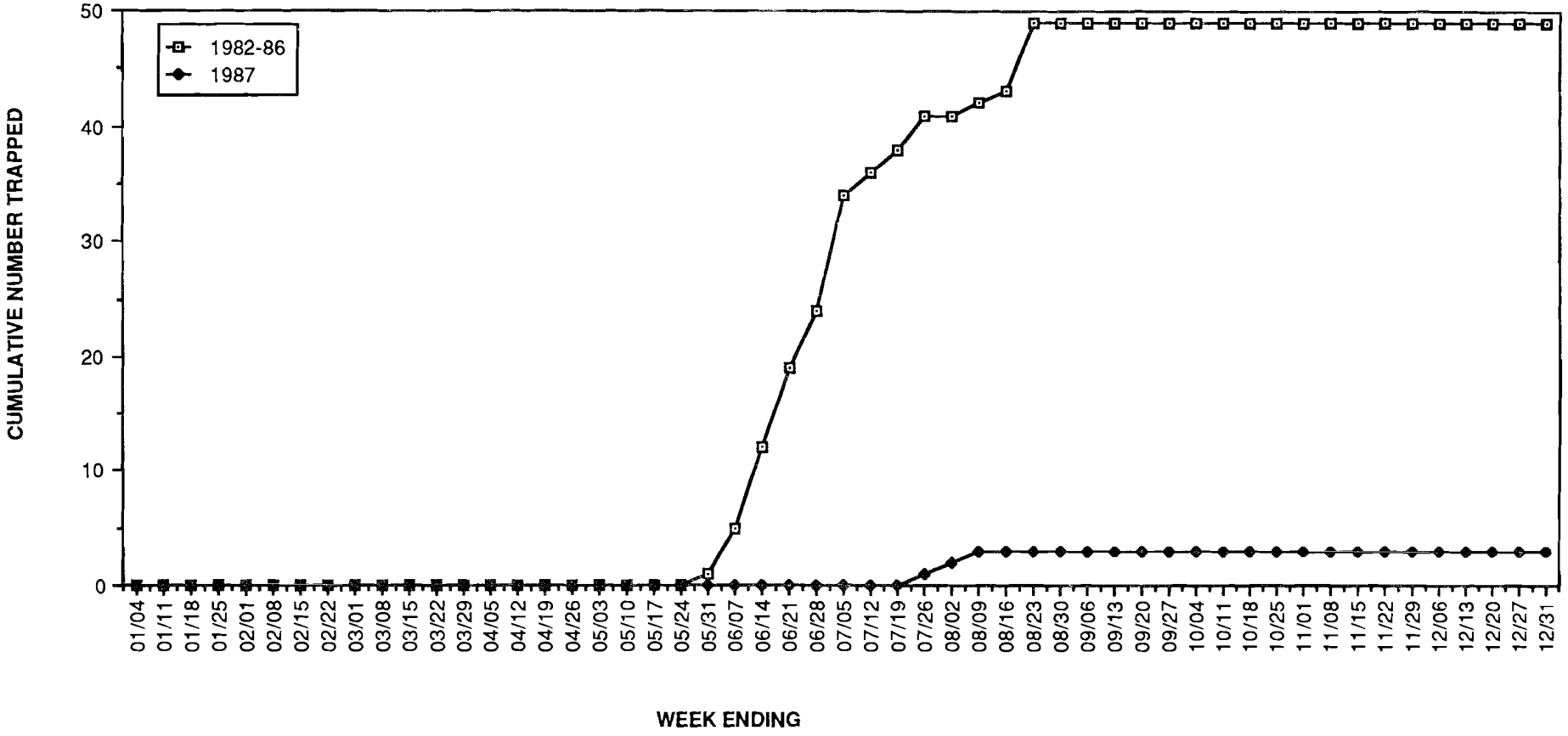
JAPANESE BEETLE TRAP FINDS

CALIFORNIA TOTALS



JAPANESE BEETLE TRAP FINDS

CUMULATIVE TOTALS



BORDER STATIONS

Do you ever wonder what the Border Station Inspectors find? TONS!! The following articles by Dick Brown indicate how much material people try to bring into California.

The Guava Caper! - Yermo PQI Shannon Savoie rejected 106 cases of guavas from Miami, Florida. They were discovered in a bed of a private pickup truck, although they were part of a commercial shipment destined for a wholesale produce house in Los Angeles. The illegal contraband was off-loaded and destroyed.

These guavas are probably the same uncertified fruit that was rejected and returned out of state at Blythe four days earlier. The fruit had not been treated. Shannon's interception may well have prevented a major infestation because guavas are grown in southern Florida, which is generally infested with Caribbean fruit fly.

Lots of Sauce! - In November, Alturas PQI John LaNeave inspected the car of a migrant farm worker from Hood River, Oregon. John found apples, apples and more apples. They were in the trunk, under the back seat, and in a luggage carrier on the roof (which had caved in the top of the vehicle). More than 400 pounds of the uncertified apples were off-loaded for disposal. Several of the individual fruit weighed more than two pounds each. "We thought when they pulled in that the car looked overloaded," John said.

Apples, Apples, Apples! - The apple maggot finds from the greater Denver, Colorado area have significantly increased the workload of Yermo Inspectors because I-15 is the main route from Denver to southern California. Autos that normally would have received oral inspections during peak traffic periods now must be thoroughly inspected. The increase in apple interceptions has caused overload problems in the station's septic system. It took seven trips and $560.00 to have it pumped out and made operational again.

Large collections have been made from other near by areas as well. PQI Jim Proctor intercepted 200 pounds from Weber County, Utah and Mona Montano took 260 pounds from Franklin County, Idaho.

Of course not all rejections must be a total loss. The following account by Dick Brown indicates that all is not necessarily lost when you have your agricultural commodities rejected at the border.

Station Husking Bee - On November 14, PQI Mike Villa rejected a load of uncertified fresh corn from Arizona. The corn was destined for a 4-H Exhibit at the local (Blythe) fairgrounds. The instructor had planned to present an entomology lecture on corn pests, and also to demonstrate corn shucking for his class. Instead (Plan B), the class came to the Blythe Station, husked the corn there, and participated in a first-hand entomological experience by watching our inspectors do their job. After a station tour, the group left with the balance of the corn, which we released as a result of negative insect findings. Everyone seemed to have fun. "We continue to increase pest awareness whenever we can," reports PQS Mohammad Azhar.

EXCLUSION AND DETECTION

VARROA MITE, *Varroa jacobsoni* -(A)- Specimens of this honeybee-infesting mite were discovered in an apiary containing bees which had recently been brought in from North Dakota. The collection was made near Chowchilla, Madera County on Dec. 1 by Don Mayeda and Elvin Ballard and again on Dec. 7 by Don Mayeda.

The charts on the following pages outline the quarantine pest interceptions made during this period:

The following "A", "B" and "Q" rated arthropods and mollusks were intercepted in quarantine during this time period.

RATING	SPECIES	COMMON NAME	DATE	ORIGIN	COUNTY	HOST	COLLECTOR(S)
Q	Adoretus sinicus	Chinese rose beetle	11/12	HI	LA	automobile	Koller
Q	Anomala orientalis	Oriental beetle	11/16	CONN	VE	potting soil	Cozzola
A	Curculio caryae	pecan weevil	11/12	TX	O	Carya illinoiensis	Fernandez
Q	Graphops sp.	a leaf beetle	11/26	GA	SD	Allium sp.	Ginsky
Q	Orchidophilus sp.	an orchid weevil	12/05	HI	LA	cut flowers	Papilli
Q	Paleocallidium rufipenne	a longhorned beetle	11/24	Japan	ALA	dunnage	Gonzalez
Q	Paleocallidium rufipenne	a longhorned beetle	12/11	Korea	ALA	conifer dunnage	Gonzalez
Q	Protaetia fusca	mango flower beetle	09/15	HI	LA	automobile	Koller
Q	Protaetia fusca	mango flower beetle	12/15	HI	SD	Ocium sp.	Brown
Q	Sinoxylon conigerum	false powderpost beetle	11/18	Thailand	LA	packing crate	Kellum
A	Anastrepha sp.	a fruit fly	11/04	Mexico	SD	Psidium sp.	Reusche
Q	Eumerus aurifrons	a bulb fly	12/02	HI	LA	Taro	Koller
A	Toxotrypana curvicauda	papaya fruit fly	11/09	Mexico	LA	papaya	Reusche
A	Toxotrypana curvicauda	papaya fruit fly	11/12	Mexico	LA	papaya	Reusche
A	Toxotrypana curvicauda	papaya fruit fly	11/22	Mexico	LA	papaya	Reusche
A	Toxotrypana curvicauda	papaya fruit fly	11/29	Mexico	LA	papaya	Muñoz
A	Toxotrypana curvicauda	papaya fruit fly	12/01	Mexico	LA	papaya	Reusche
A	Toxotrypana curvicauda	papaya fruit fly	12/07	Mexico?	LA	papaya	Dbaca
A	Toxotrypana curvicauda	papaya fruit fly	12/20	Mexico	LA	papaya	Reusche
Q	Coptosoma xenthagramma	a coptosomid bug	10/26	HI	LA	?	Hansen
Q	Nezara viridula	southern green stinkbug	10/23	New Zealand	LA	Zantedeschia	Hansen
Q	Nezara viridula	southern green stinkbug	11/18	HI	SD	cut basil	Ginsky/Walsh
Q	Nezara viridula	southern green stinkbug	12/14	HI	SD	Ocium sp.	Brown
Q	Pulvinaria urbicola	urban soft scale	11/12	HI	SAC	Cordyline	Jensen
A	Aleurocerus sp.	a whitefly	11/03	Mexico	SBdno	cut palms	Nash
Q	Aleurodicus dispersus	spiraling whitefly	11/24	HI	SD	cut foliage	Ginsky
Q	Aleurodicus dispersus	spiraling whitefly	12/05	HI	LA	lalot	Papilli
Q	Aleurodicus dispersus	spiraling whitefly	12/15	HI	LA	lalot	Hansen
Q	Aleurotrachelus sp.	a whitefly	10/28	Mexico	SBdno	cut palms	Dearman/Nash
A	Aspidiotus destructor	coconut scale	12/03	HI	SJ	areca palm	Davelvy
A	Ceroplastes rubens	red wax scale	12/01	HI	SD	cut foliage	Brown
B	Chionaspis americana	elm scurfy scale	12/07	ARK	SD	Ulmus alata	Geraty/Sims
Q	Coccus viridis	green scale	10/29	HI	LA	ginger	Hansen
Q	Coccus viridis	green scale	11/25	HI	LA	ginger	Hansen
Q	Coccus viridis	green scale	12/02	HI	LA	ginger	Hansen
Q	Coccus viridis	green scale	12/03	HI	LA	ginger	Hansen
Q	Diaspis sp.	an armored scale	11/19	Mexico	SD	Tillandsia sp.	Kenyon

Q	Diaspis sp.	an armored scale	11/25	Mexico	STB	Tillandsia sp	Tingos
B	Eriococcus azaleae	azalea bark scale	12/07	ARK	SD	Azalea sp.	Geraty/Sims
Q	Fissuraspis ulmi	elm scale	12/07	ARK	SD	Ulmus alata	Geraty/Sims
A	Howardia biclavis	mining scale	11/03	FLA	LA	Ficus benjamina	Calicchia
B	Lepidosaphes beckii	purple scale	10/28	Italy	LA	Citrus limon	Koller
B	Lepidosaphes gloverii	Glover scale	10/28	Italy	LA	Citrus limon	Koller
Q	Melormenis antillarum	a flatid planthopper	10/28	HI	SJ	cut flowers	Watkins
Q	Mesolecanium sp.	a soft scale	12/03	Guatemala	RIV	avocado bud wood	Brown
Q	Palmicultor palmarum	palm mealybug	11/06	HI	VE	Cocos nucifera	McClure
Q	Paraleyrodes sp.	a whitefly	12/21	HI	SD	spice	Kennedy
Q	Philephedra tuberculosa	a soft scale	12/24	Mexico	CC	papaya	Zeigler
A	Pinnaspis buxi	boxwood scale	10/26	HI	LA	ginger, monstera	Hansen
A	Pinnaspis strachani	lesser snow scale	11/02	HI	LA	ginger	Hansen
A	Pinnaspis strachani	lesser snow scale	11/07	HI	LA	Cycas revoluta	Olsen
A	Pinnaspis strachani	lesser snow scale	11/19	HI	LA	ginger	Hansen
A	Pinnaspis strachani	lesser snow scale	11/25	HI	LA	ginger	Hansen
A	Pinnaspis strachani	lesser snow scale	11/27	HI	LA	sago palm	Olson
A	Pinnaspis strachani	lesser snow scale	12/01	HI	LA	ginger	Hansen
A	Pinnaspis strachani	lesser snow scale	12/07	HI	LA	Cycas sp.	Hansen
A	Pinnaspis strachani	lesser snow scale	12/16	HI	LA	ginger	Hansen
Q	Pinnaspis uniloba	an armored scale	10/29	HI	SF	Alyxia lovaeformis	Rios
Q	Planococcus pacificus	Pacific mealybug	11/25	Japan	ALA	house plant	Conant
A	Pseudaulacaspis cockerelli	magnolia white scale	11/03	FLA	SJ	areca palm	Hudson
A	Pseudaulacaspis cockerelli	magnolia white scale	11/06	FLA	LA	Phoenix roebelinii	Olson
A	Pseudaulacaspis cockerelli	magnolia white scale	11/11	HI	ALA	Alixia loivaeformis	Musso
A.	Pseudaulacaspis cockerelli	magnolia white scale	11/11	HI	LA	cut palms	Hansen
A	Pseudaulacaspis cockerelli	magnolia white scale	11/19	HI	LA	cut palms	Hansen
A	Pseudaulacaspis cockerelli	magnolia white scale	11/25	HI	SLO	areca palm	Frank
A	Pseudaulacaspis cockerelli	magnolia white scale	12/07	HI	LA	lalot	Hansen
B	Pseudococcus elisae	elisae mealybug	11/24	HI	LA	Aglaonema sp.	Kellam
Q	Pseudococcus lycopodii	club moss mealybug	12/07	HI	ALA	Lycopodium	Musso
A	Pulvinaria psidii	green shield scale	10-26	HI	LA	ginger	Hansen
A	Pulvinaria psidii	green shield scale	10/28	HI	LA	ginger	Hansen
A	Pulvinaria psidii	green shield scale	10/29	HI	LA	ginger	Hansen
A	Pulvinaria psidii	green shield scale	11/02	HI	LA	ginger	Hansen
A	Pulvinaria psidii	green shield scale	11/03	HI	LA	ginger	Hansen
A	Pulvinaria psidii	green shield scale	11/04	HI	LA	ginger	Hansen
A	Pulvinaria psidii	green shield scale	11/11	HI	LA	cut flowers	Hansen
A	Pulvinaria psidii	green shield scale	11/18	HI	LA	ginger	Hansen
A	Pulvinaria psidii	green shield scale	11/19	HI	LA	ginger	Hansen
A	Pulvinaria psidii	green shield scale	11/25	HI	LA	ginger	Hansen

A	Pulvinaria psidii	green shield scale	12/01	HI	LA	ginger	Hansen
A	Pulvinaria psidii	green shield scale	12/05	HI	LA	ginger	Papilli
A	Pulvinaria psidii	green shield scale	12/09	HI	LA	ginger	Hansen
A	Pulvinaria psidii	green shield scale	12/12	HI	LA	ginger	Hansen
A	Pulvinaria psidii	green shield scale	12/14	HI	LA	ginger	Hansen
A	Pulvinaria psidii	green shield scale	12/17	HI	LA	ginger	Hansen
Q	Quadraspidiotus taxodii	bald cypress scale	12/07	ARK	SD	Taxodium disticum	Geraty/Sims
Q	Semiaphis heraclei	an aphid	11/25	HI	MO	Anethum graveolens	Young/Oliver
B	Siphanta acuta	torpedo bug	10/29	HI	SF	Alyxia lovaeformis	Rios
B	Siphanta acuta	torpedo bug	12/24	HI	SAC	cut foliage	Jensen
Q	Toumeyella sp.	a soft scale	12/03	Guatemala	RIV	avocado bud wood	Brown
Q	Anoplolepis longipes	longlegged ant	11/10	HI	SD	cut foliage	Brown
Q	Monomorium sp.	an ant	12/23	HI	SJ	cut flowers	Watkins
Q	Pheidole megacephala	big-headed ant	11/25	HI	SD	Bambusa sp.	Geraty/Davis
Q	Pheidole megacephala	big-headed ant	11/28	HI	LA	cut foliage	Olson
Q	Pheidole megacephala	big-headed ant	12/08	HI	SD	cut flowers	Ginsky
Q	Pheidole megacephala	big-headed ant	12/23	HI	SJ	cut flowers	Watkins
Q	Solenopsis sp.	a fire ant	11/16	HI	RIV	cut flowers	Francisco
Q	Tapinoma melanocephalum	an ant	10/28	HI	VE	Schefflera	McClure
Q	Technomyrmex albipes	an ant	10/31	HI	LA	cut flowers	Cassidy
Q	Technomyrmex albipes	an ant	12/23	HI	SJ	cut flowers	Watkins
Q	Chrysodeixes chalcites	green garden looper	10/29	HI	BU	Anthuriums	Mattoon
Q	Chrysodeixis chalcites	green garden looper	12/04	HI	SO	Cordyline	Kobayashi
Q	Chrysodeixis chalcites	green garden looper	12/17	HI	VE	Cordyline sp	Hixson
Q	Chrysodeixis chalcites	green garden looper	12/23	HI	SJ	cut flowers	Watkins
A	Lymantria dispar	gypsy moth	10/26	ME	NA	OHA	George
A	Lymantria dispar	gypsy moth	11/03	MA	O	OHA	Hill
A	Lymantria dispar	gypsy moth	11/04	VA	STCL	OHA	Maggi
A	Lymantria dispar	gypsy moth	11/09	DEL	SH	OHA	Pfeiffer
A	Lymantria dispar	gypsy moth	11/12	NJ	SBO	OHA	Wright
A	Lymantria dispar	gypsy moth	11/16	MA	RIV	OHA	Francisco
A	Lymantria dispar	gypsy moth	11/20	NJ	LA	OHA	Neblett
A	Lymantria dispar	gypsy moth	11/24	?	SD	?	Muñoz
A	Lymantria dispar	gypsy moth	12/03	DEL	SD	lumber	Muñoz
A	Lymantria dispar	gypsy moth	12/04	VA	SD	OHA	Muñoz
A	Lymantria dispar	gypsy moth	12/07	?	ALA	OHA	Weston
A	Lymantria dispar	gypsy moth	12/09	VA	SD	OHA	Dearie
A	Lymantria dispar	gypsy moth	12/14	DEL	SD	automobile	Avery
A	Lymantria dispar	gypsy moth	12/14	MASS	STCL	OHA	Price
A	Lymantria dispar	gypsy moth	12/15	PENN	SJ	OHA	Watkins
A	Lymantria dispar	gypsy moth	12/22	NY	SH	OHA	Pfeiffer

Q	Malacosoma americanum	eastern tent caterpillar	12/11	MD	SAC	OHA	Engstrom
Q	Malacosoma sp.	a tent caterpillar	12/14	NJ	SH	OHA	Pfeiffer
Q	Orgyia leucostigma	white-marked tussock	12/23	PENN	SAC	OHA	Miller
B	Bradybaena similaris	a snail	11/10	FLA	LA	Schefflera sp	Olson
B	Bradybaena similaris	a snail	11/17	FLA	MO	ornamentals	Correia
Q	Leidyula sp.	a slug	12/03	HI	SON	Dracaena marginata	Vernon
Q	Limax sp.	a slug	11/02	Puerto Rico	SON	Dracaena	Vernon
Q	Xiphidiopsis sp.	a katydid	12/17	HI	VE	ming fern	Hixson

The following "A", "B" and "Q" rated arthropods and mollusks were intercepted in quarantine during this time period but were not fully identifiable due to condition, life stage or lack of comprehensive taxonomic works on the groups.

RATING	SPECIES	COMMON NAME	DATE	ORIGIN	COUNTY	HOST	COLLECTOR(S)
Q	Cerambycidae	a longhorned beetle	11/24	Asia	ALA	pine & birch	Gonzalez
Q	Curculionidae	a weevil	11/24	Australia	ALA	conifer dunnage	Gonzalez
Q	Curculionidae	a weevil	12/01	Mexico	STB	Tillandsia	Tingos
Q	Scolytidae	a bark beetle	11/24	Asia	ALA	pine & birch	Gonzalez
Q	Scolytidae	a bark beetle	12/08	Taiwan?	ALA	dunnage	Conant
Q	Scolytidae	a bark beetle	12/11	HI	ALA	conifer dunnage	Gonzalez
Q	Scolytidae	a bark beetle	12/17	?	ALA	dunnage	Conant
Q	Pentatomidae	a stink bug	12/07	HI	SD	Ocium sp.	Brown
Q	Rhopalidae	a grass bug	12/01	HI	SD	cut foliage	Brown
Q	Fulgoroidea	a planthopper	12/23	HI	SJ	cut flowers	Watkins
Q	Pseudococcidae	a mealybug	12/17	Japan	ALA	Schefflera sp	Conant
Q	Noctuidae	a plusiine looper	12/07	HI	SAC	Cordyline sp.	Jensen
Q	Psychidae	a bagworm	10/27	HI	LA	automobile	Koller
Q	Pyralidae	a pyralid moth	11/13	MI	CC	OHA	Alavi
Q	Blattidae	a cockroach	12/08	Thailand	SLO	orchids	Frank

CREDITS

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